

ALBERT'S SQUARE EYES



JUDITH THAMM

Junior computing on
the Amstrad CPC6128

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CONTENTS

Chapter.	Page
1. Albert Starts Computing	1.
The keyboard, Ready prompt, cursor, shift key, double speech marks, CLS, PRINT, MODE, RETURN, ENTER, asterisk and character.	
Summary of new words	8.
2. Albert Writes a Program	9.
Line numbering, a program, REM, RUN, SAVE, CLR, DEL, arrow keys, LIST, Basic language and how to reset.	
Summary of new words	16.
3. Albert Learns About Colours	18.
The two ON and OFF switches, the colours for each MODE, INK, PEN, BORDER, LOAD, EDIT, RENUM and the colour chart.	
Summary of new words	26.
4. Albert Makes a Mistake	27.
Columns across, rows down, LOCATE, RUN" and remembering left and right.	
Summary of new words	36.
5. Albert's Eyes Are Square!	37.
MODE 0, the hash sign, default, WINDOW, PAPER, COPY, the dollar sign, and AUTO.	
Summary of new words	47.

1. ALBERT STARTS COMPUTING

In Albert's class at school, there were four new Amstrad CPC6128's. They were in a special part of the classroom because all the other classes had to have a turn to use the computers too.

Their class had two lessons a week at the computers. First lesson after lunch on Tuesday and on Thursday. Tuesdays and Thursdays were Albert's favourite days.

In their first lesson, they had been given a large chart of the keyboard. There were several key names to learn. Some of the names were strange too.

Albert's teacher suggested that he should colour in the keyboard to help him remember which hand to use for which set of keys.

Here is the chart that Albert was given to study:

THE KEYBOARD .

ESC	1	2	"	#	\$	%	&	'	()	=	E	C	D	f7	f8	f9
TAB	Q	W	E	R	T	Y	U	I	O	P	-	-	{	R	f4	f5	f6
CAPS	A	S	D	F	G	H	J	K	L	;	+	}	U	R	f1	f2	f3
SHIFT	Z	X	C	V	B	N	M	<	>	,	?	/	~	SHL	f0	↑	.
CONT-ROL	COPY				SPACEBAR						ENTER				↓	↓	↓

↑ JOYSTICK

PORT (LEFT)

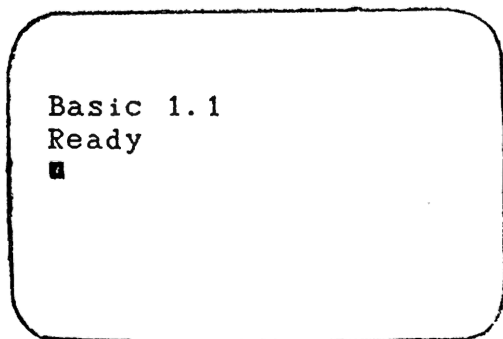
DISC DRIVE

(RIGHT) ↓

After careful thought, Albert decided on green for the left hand keys and blue for the right hand keys. What colours would you choose?

Then Albert had to learn which keys he would use first.

When the computer is turned on, the screen is blue, the writing is yellow, and after the computer's brand name and copyright come the words:



'Basic' is the name of the language.
'Ready' is called the prompt.
'█' is called the cursor.

The teacher told Albert to type:

print "Albert" this way:-

- a. Type the word 'print'.
- b. Press the space bar once to make a space.
- c. Hold down the SHIFT key on the right with the right hand (disc drive hand), and with the left hand, press the '2' to get the double speech marks and 'A' to get capital 'A'.
- d. Type 'bert' normally.
- e. Right hand press 'SHIFT', left hand press '2' to get the double speech marks again.
- f. Press either the RETURN or the ENTER key.

```
print "Albert"  
Albert
```

```
Ready  
■
```

Albert's teacher told Albert to repeat that several times until it did not seem strange to press SHIFT with one hand and double quotation marks and the capital 'A' with the other hand.

See if you can do what Albert did.
Type:

```
print "Albert"           [press ENTER]
```

Do it 3 or 4 times again.
Now put your first name instead:

```
print "Your name"       [press ENTER]
```

Don't forget the space!

When you have a screen full of 'print' statements, type:

```
cls                       [press ENTER]
```

And the screen will clear!

Now Albert could get his name to PRINT on the screen and he could CLEAR the screen.

The computer can have three sizes of writing, Albert was told. The smallest size is called MODE 2.

Type MODE 2 now and press ENTER

mode 2 [press ENTER]

(Don't forget the space.)
The letters are only half as wide.

mode 1 [press ENTER]

This is the usual mode to work with.

mode 0 [press ENTER]

The letters are twice as wide. Most games use MODE 0.
Return to MODE 1 type:

mode 1 [press ENTER]

You must press RETURN or ENTER each time to let the computer to know that you are finished with one line and want to start another.

Albert was told to hold down the SHIFT key with one hand and type

this sign :

```
print "*"          [press ENTER]
```

*

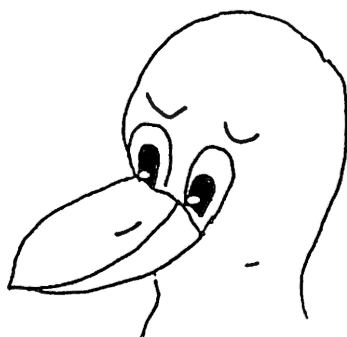
The asterisk is used to mean multiply. It can also make an attractive edging. Each letter, sign, or space is called a 'character'.

```
print "*** ***"    [press ENTER]
```

*** **

As soon as he could get all of these correct, Albert was told, he could write a program.

Albert was
delighted!



A LIST OF COMPUTER WORDS

- PRINT A command word used to make printing show on the screen.
- " Double quotation marks go around words that are to show on the screen.
- READY The prompt.
- CURSOR The solid block that shows where the next character will be printed.
- MODE The number of columns to the screen. 0 = 20 columns; 1 = 40 columns; 2 = 80 columns. Each mode has 25 rows down.
- CLS Clear the screen.
- Character A letter, a sign or a space.
- * The asterisk is obtained by pressing the SHIFT key and the colon key. The asterisk is the computer sign for 'multiply'.

2. ALBERT WRITES A PROGRAM

At home, Albert had a computer too. He liked to play games. Time always passed quickly when Albert settled in to a game. He had a new disc with four games on it. Albert did not bother to practise what he had learned at school. 'Starquake' and 'Monty on the Run' were waiting for him to finish his tea and come back and play with them.

In no time at all, it seemed, it was Albert's bedtime. Every night was the same. Home from school, Albert did his chores, then he played computer games until tea time. After tea, back to the computer until bed time.

Next morning Albert remembered that it was Thursday, computer lesson day. No-one was late coming in after lunch. With only four computers, everyone was on their best behaviour in case... It would be terrible to miss a computer lesson as a form of punishment!

The teacher asked first that everyone was to write down how to make their name PRINT on the screen..

Albert was very careful writing down his answer to the first question.

Question two was: What three letters mean 'clear the screen'?

Question three was: What is the word that is used to change the size of the letters on the screen?

Question four was: What is the multiply sign?

Question five was: What three things on the keyboard can be a character?

Can you answer those five questions?

The last one is quite hard- but you need to know what the meanings are of 'computer words'. Albert's answers are on the next page.

Here are Albert's answers:

1. `print "Albert"`
2. `cls`
3. `mode`
4. `*`
5. a letter of the alphabet, a sign, and a space.

Did you have the same correct answers?

The teacher explained that instructions to the computer are given in a special order. And so that the computer knew what to do, and when to do it, the lines of instructions were numbered.



Albert was
interested.

The numbering went in tens. 10,20,30, and so on. The numbers in between were left in case other lines needed to be inserted. The

zero in a computer number has a slash through it, so that it is not confused with the letter 'O'.

Here is a program to type in. The first line is a remark (or reminder) line. REM tells the computer to ignore the rest of this line!

Program A.

```
10 REM printing a message      [RETURN]
20 MODE 1                      [RETURN]
30 CLS                        [RETURN]
40 PRINT "** ALBERT **"        [RETURN]
```

Albert was given a number, and told to write it on the cover of his Computer book beside his name. It was his roll number. Each time Albert SAVED a program on the class disc, he was to use his number. Albert's number was 12.

When Albert had typed in the program, he was to save it to disc. He was to type:

```
SAVE"12A                      [RETURN]
```

'12' was his roll number and 'A' was the program name. '12A' was to be the filename for the program.

Later, Albert's teacher would check each program and mark it.



```
10 rem printing a mess  
age on the screen  
20 mode 1  
30 cls  
40 print "** ALBERT **"  
save"12a  
Ready
```

Albert typed the program in carefully. He did not want to get an error message.

The message would say: 'Syntax error'.

To correct any errors, you can use two keys to help. The DEL key will eat up any characters to the left of the cursor. The CLR key will remove the character under the cursor and

suck in and swallow characters to the right, when it is held down.

The teacher explained that a character can be inserted anywhere in a line of program by moving the cursor along the line with the arrow keys on the keypad. You can not move the cursor beyond the characters in a line. A line can have 255 characters in it.

Mistakes are easy to make in a long line of program, and sometimes they are difficult to find. Short program lines are best.

Albert wanted to see if his program worked, but the teacher said that he must LIST and check his program first. So Albert typed:

LIST [RETURN]

All the Basic language words changed from small letters to capital letters.

The Basic words were: REM, MODE, CLS, and PRINT.

Try this program yourself. Go back a page and type in exactly what Albert did. Then, SAVE the program. Check with your teacher about a filename.

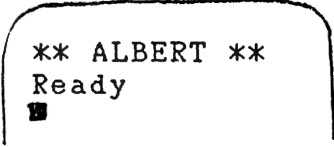
LIST the program and check it.

Now type:

RUN

[RETURN]

Albert's program worked. Did yours?



```
** ALBERT **  
Ready  
■
```

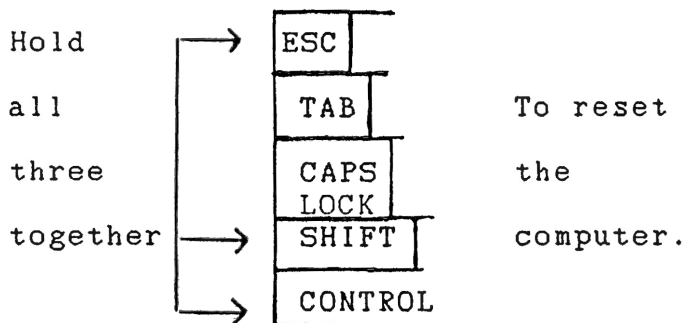
This is what
appeared on
screen.

When a program is typed in, not only do you see what goes on the screen, but the computer puts the program in its memory.

RUN on its own will make the program work if it is in memory.

If you turn off the computer or reset it by pressing CONTROL, SHIFT, ESC together, the program would be

lost from the computer's memory.



NEW COMPUTER WORDS

SAVE"... Type the word save and double quotation marks, then the name of the program you want to SAVE. Keep the name short. Eight letters or less.

CLR Removes the character under the cursor and to the right, if held down.

DEL Removes characters to the left of the cursor.

Arrow keys Move the cursor across a line of program.

Keypad Number keys beside the disc drive.

Basic language Words that turn into capitals when LISTed, eg SAVE, PRINT.

255 Characters The number of characters allowed in a line of program.

LIST This command prints the program on the screen. Any Basic language words are changed from small to capital letters.

Filename The program's name to go in the index on the disc is a 'filename'.

RUN Makes a program work if the listing is in the computer's memory.

CONTROL, SHIFT, ESC Hold down together to reset the computer.

Program A set of commands numbered in the order they are to be done.

ALBERT LEARNS ABOUT COLOURS



Albert
playing
a game..

Albert couldn't leave his computer alone now. He even practised writing PRINT statements to the screen. But most of the time he played games.

Because he had a computer at home, Albert knew how to turn the computer on and off the right way. There are two switches to turn on and off.

The switch on the keyboard is behind it, near all the cables. go and look behind the keyboard and see where the switch is. The switch on the monitor says 'power'.

Switch on the monitor and then the keyboard.

Switch off the keyboard and then the monitor. Never leave the monitor on.

In his next computer lesson, Albert was told about colours. His teacher explained that each Mode can have only a set number of colours on the screen at one time.

Mode 0 can have any 16 of the 27 shown on the colour chart on the disc drive.

Mode 1 can have any 4 of the 27.

Mode 2 can have any 2 of the 27.

As well each mode can have a BORDER colour.

To change the colour of the screen an INK command is given, eg INK 0,1. The INK command has two numbers with a comma in between them.

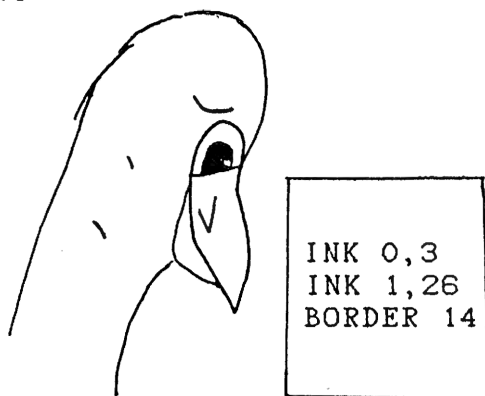
The first number is a PEN number.

INK 0,.. is the background colour command and INK 1,.. is the writing colour command.

Select two colours now from the colour chart, plus a border colour.

Albert thought carefully. He would choose red (number 3) for the background, white (26) for the writing and pale blue (14) for the border.

The teacher said that Albert must write his instructions to the computer on paper first, so Albert wrote:



and then put down his pencil.

After Albert's paper was checked he went to the computer and typed in each line. First Albert typed:

INK 0,3 [and pressed RETURN]

and the centre of the screen turned red. The border stayed blue and the writing stayed yellow. Then he typed:

```
INK 1,26          [and pressed RETURN]
```

and the writing turned white, but the border was still blue. Finally he typed:

```
BORDER 14        [RETURN]
```

and the border turned pastel blue.

Using those three commands, change the background, the writing and the border until you have tried all the colours. Do it this way:

```
INK 0,3           [RETURN]
INK 1,26          [RETURN]
BORDER 14         [RETURN]
```

Then try other colours:

```
INK 0,9           [RETURN]
INK 1,21          [RETURN]
BORDER 10         [RETURN]
```

and so on.

When Albert had tried all the colour numbers, he let someone else have a turn at the computer.

The teacher had written instructions on the blackboard.

'Write the program you did as 'A' with the two INK commands and a border command. Use any 3 colours.'

Albert looked back through his notebook with 'Computer Notes' written on the cover and found Program 'A'.

This next program would be called Program B, the teacher explained. The REM line could say:

```
10 REM printing a message using color
```

The teacher wrote the line on the blackboard, then wrote:

```
LOAD"12A           [RETURN]
```

and explained that when Albert went to the computer, he was going to

tell the computer to read his first program from the class disc, and put it in memory. Albert was to type:

LIST

[RETURN]



```
load"12a
Ready
list
```

Albert LOADED his program
and typed: LIST.

The next thing Albert had to do was
change line 10.

Another command was needed for the
change: EDIT 10 [RETURN]

CURSOR

```
EDIT 10
```

```
10 REM printing a message  
on the screen
```

Notice that the cursor sits on the first character in the line after the line number. The arrow keys are used to move the cursor along the line until it is on the 'o' of 'on'. Hold the CLR key until 'on the screen' is swallowed up, then type:

```
...using colour          [RETURN]
```

The teacher explained that the first program could be used to make the second program because one program can be changed to make another.

When Albert had altered line 10, his teacher told him that colour commands are placed after the MODE command. The line numbers to use for Albert's colour commands were:

```
31 INK 0,3                [RETURN]  
32 INK 1,26               [RETURN]  
33 BORDER 14              [RETURN]
```

This would use some of the spare lines between lines 30 and 40 and put the colour commands in their correct position.

After typing in the lines slowly and carefully, Albert typed:

```
SAVE"12B      [RETURN]
```

Then he ran the program to see that it worked. He typed: RUN [RETURN]

Finally he typed: LIST [RETURN]
Here is the listing:

```
10 REM printing a message using  
colour  
20 MODE 1  
30 CLS  
31 INK 0,3  
32 INK 1,26  
33 BORDER 14  
40 PRINT "** ALBERT **"
```

To make the numbering run in tens again, type: RENUM [RETURN]

RENUM means 're-number'. Type: LIST and press RETURN again.
Now the line numbers are 10, 20, 30, 40, 50, 60, and 70.

SAVE"12B again and press RETURN.

NEW COMPUTER WORDS

BORDER The border command is followed by a space and a colour chart number.

INK 0,1 Gives a blue background.

INK 1,24 Gives yellow writing.

LOAD"..(program name) Tells the computer to read a program from disc and hold it in memory, waiting for another command.

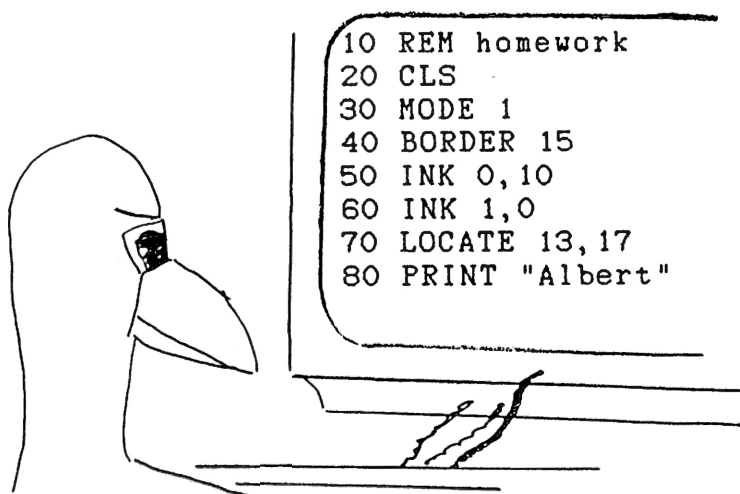
EDIT followed by a line number, recalls that line that can then be changed.

RENUM Renumbers a program.

MASTER COLOUR CHART Found on the disc drive.

PEN The first number in an INK command tells the computer which PEN to fill. If the INK is to be used for the background, the same number is used for the PAPER command. PEN 1 or PAPER 1 mean INK 1's colour.

ALBERT MAKES A MISTAKE



```
10 REM homework
20 CLS
30 MODE 1
40 BORDER 15
50 INK 0,10
60 INK 1,0
70 LOCATE 13,17
80 PRINT "Albert"
```

Albert was busy at his computer. He was writing a simple program. At school he was learning to print words on to the screen.

This was his homework. Here are the instructions Albert had to follow. Do you think that Albert got his homework right?

Read the instructions Albert was given:

Homework Assignment.

Write a program that will print your name in the centre of the screen. Use a new line for each command. Use 3 colours in a 4 colour mode.

Use these command words, starting at line 10:

```
PRINT, LOCATE, REM, MODE, CLS, INK  
0,10, BORDER 15, INK 1,0.
```

(As well, your name, quotation marks, the word 'homework'.)

First Albert checked through his computer notes. The command words could be typed in using lower case or small letters.

A program is a set of numbered instructions that must be given in the same order as the computer was made to accept instructions.

The word REM tells the computer to ignore the rest of a line. A REMark line reminds you what a program is about.

Line numbering usually starts from line 10. The next line is line 20. The nine line numbers in between are used for alterations and additions.

When you RUN a program, all you want to see on the screen is the program, not the instructions too! An early command in any program is CLEAR THE SCREEN! or CLS.

The 4 colour MODE is MODE 1. It has 40 columns across the screen and 25 rows down, starting from the left.

The BORDER colour (15) is orange.
INK 0,10 the background or PAPER
(INK 0,...) will be a green (10).
INK 1,0 the writing PEN (INK 1,...)
will be black (0)

LOCATE means 'find'. Find 13,17.
LOCATE 13,17. The first number is the column number; count from the left side of the screen. The second number is the row number; count down from the top of the screen.

LOCATE always has two numbers with a comma in between.

	COLUMNS ACROSS										
R	1	2	3						38	39	40
O	2										
W	3										
S											
D											
O											
W											
N											

20	21
13	13

24	
25	

The centre is column 20 or 21, and row 13.

Albert had to put his name in the centre of the screen. His name is 6 letters in length. If Albert drew a numbered chart with the middle letters of his name in the middle column numbers of the screen, he would get his name in the centre.

18	19	20	21	22	23	Column numbers
A	L	B	E	R	T	

As row 13 is half way between 1 and 25, Albert's name should be in column 18 and row 13.

LOCATE column number, a comma, row number.

Lastly, after telling the computer WHERE you want something done, you must tell it to DO something. PRINT sends writing to go on the screen. Words or text to go on screen must have double quotation marks both before and after them.

80 PRINT "Albert" Double quotation marks are found above '2'. Hold down the SHIFT key beside the disc drive with your right hand and then press the '2' key near the ESC key with your left hand. Don't miss out the two spaces.

Now, the important question... Did Albert get his homework right?

Albert studied his question and decided that it was easy. Albert was lucky that he had an Amstrad computer at home too and he could check his homework. Albert was wrong!

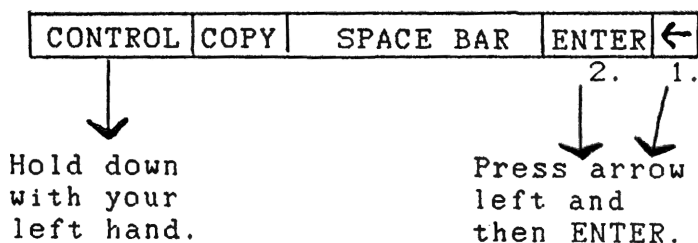
When Albert finished writing the program he typed it in and with a working disc in the disc drive, he did three things.

First he decided on a name for the program: HWK-12A short for homework and the 12 was his roll number, the A for the first lot of work. The name must be used when the program is written to the disc and when it is run. To write a program to disc, SAVE"... is used.

Then Albert typed: SAVE"HWK-12A and pressed ENTER.

Next, to test the program, Albert reset the computer by pressing CONTROL, SHIFT, and ESC together.

He ran his program by typing: HWK-12A and then he held down the CONTROL key with his left hand and pressed the arrow left key and then ENTER with his right hand for RUN"..



This pushes HWK-12A aside to the right and inserts RUN" to the left:

RUN"HWK-12A

Albert ran his program... and he was wrong!



Albert

Instead of being in the centre of the screen, his name was down the bottom and definitely to the left!

This time Albert had to be more careful. He typed: LIST so that he could look at his program. Copy in Albert's homework program and then type RUN (yes type it).

Now can you see where Albert fell into a trap? He mixed up rows and columns. Column first, row second.

Albert rubbed his eyes. He thought he would have been finished by now.. there was a game he intended to play.

The cursor seemed to be blinking hard at him and the Ready sign was wobbling. He stared hard at line 60.

He saw his mistake, he should have put:

60 LOCATE 17,13

Quickly Albert retyped line 60. By typing the whole line again, the old line 60 was overwritten.

Albert did: SAVE"HWK-12A and and then ran the program again.

Much better this time, but his name was still not quite in the centre. Albert rubbed his beak thoughtfully with his wing and then typed:

EDIT 60 [RETURN of course!]
60 LOCATE 17,13

He used the arrow key to move the

cursor over the 7 in 17. Then he pressed the CLR key at the top of the keyboard. The line looked like this, then:

```
60 LOCATE 1,13
```

The cursor is
over the comma.

Albert pressed 8 and the number pushed into the line moving the other characters (the comma and 13) to the right. A character is a space, a number, a letter or a symbol.

Now line 60 was correct:

```
60 LOCATE 18,13
```

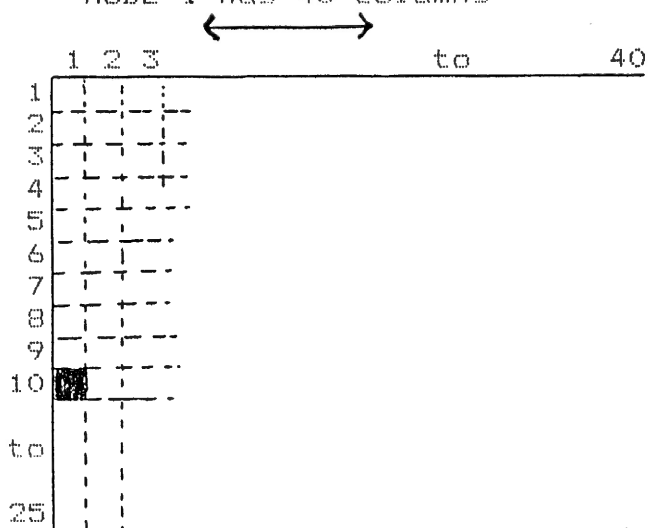
Once again Albert saved his program with: SAVE"HWK-12A [RETURN].

Do exactly what Albert did. Correct the line in two different ways and SAVE the program each time with the same name. Only two entries will appear on the disc: HWK-12A.BAS and HWK-12A.BAK. CAT the disc and see.

NEW COMPUTER WORDS

LOCATE Finds a position on the screen. LOCATE column number, comma, row number. LOCATE 1,10 means find character position 1 - the far left hand column, and position 10 - the tenth row down from the top.

MODE 1 has 40 columns



LEFT
(JOYSTICK PORT)

RIGHT
(DISC DRIVE)

3. ALBERT'S EYES ARE SQUARE

Each computer lesson was started with a question session like this:

1. How many rows in a screen?
2. Name the command word that means 'find'?
3. Where does column one start?
4. Where is this position on the screen: column 40, row 25, in MODE 1?
5. What word appears on the screen after you LOAD".."?

Most of Albert's class got every answer right because they liked computing! Albert's answers are at the end of the chapter. He got all his answers right. Did you?

The teacher made a record of the marks and told them that the command that they were going to learn about today was going to use MODE 0 and several colours. MODE 0 has 20 columns and 25 rows, and can have up to 16 colours at the same time. The command word 'WINDOW' works the same

way as LOCATE. They both count their positions from the top left hand corner of the screen.

WINDOW also uses a 'stream' command. The '#' (hash) is used to indicate a 'stream' or direction where a computer message is to be sent.

When the computer is turned on, you see the pre-set screen and the pre-set colours. This is called the DEFAULT screen and DEFAULT colours. MODE 1 is the DEFAULT mode. The DEFAULT WINDOW does not need to be given. Any commands that have no stream indicator after them, that is the hash sign above 3, is sent to WINDOW #0, the default window.

If you want to make another window, then any commands that you want done in that window must include the hash sign and the window number.

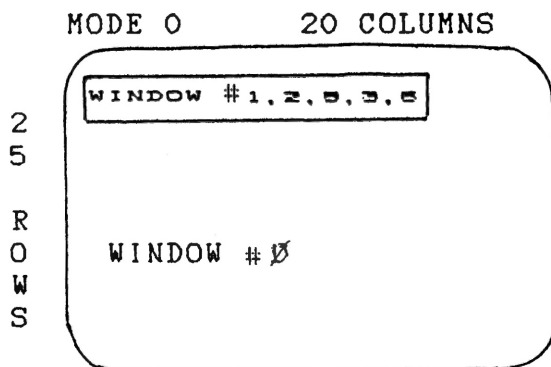
For example: PRINT "ALBERT" would print 'ALBERT' in the default window. But PRINT #1,"ALBERT" would print 'ALBERT' in window number one.

Here is how a WINDOW command must be set out: WINDOW #1,2,9,3,6

WINDOW hash 1, comma, column number left, comma, column number right, comma, row number top, comma, row number bottom

or

WINDOW #(stream number),left,right, top,bottom.



The screen is default WINDOW #0.

To make WINDOW #1 a different colour the PAPER command must be used.

PAPER #1,2 [RETURN]

The teacher explained that this

command on its own would not make the window another colour, as the window had to be cleared of its old colour to the new colour with:

```
CLS #1          [RETURN]
```

Albert was told to try those three commands now. He went to the computer and typed in:

```
CLS            [RETURN]
Ready
WINDOW #1,2,9,3,6      [RETURN]
Ready
PAPER #1,2           [RETURN]
Ready
CLS #1             [RETURN]
```

and just where he had been typing cleared to make an oblong light blue window.

Albert's teacher told him that he was to type in a long program to show the 8 possible windows in 8 different colours and print a message in each window.

The teacher gave Albert the program

to type in. It had a lot of lines.
Albert was told to type: AUTO and
press RETURN first to make the
automatic numbering start.



Albert
studied
the long
program.

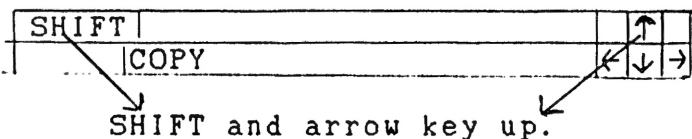
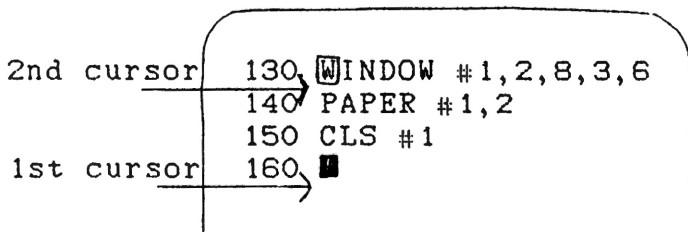
Listing for WINDOW

10 REM EIGHT WINDOWS	[Press
20 MODE 0	[RETURN
30 CLS	[or
40 INK 0,11	[ENTER
50 INK 1,0	[after
60 INK 2,6	[each
70 INK 3,15	[line.
80 INK 4,7	
90 INK 5,18	
100 INK 6,24	
110 INK 7,2	
120 INK 8,13	
130 WINDOW #1,2,9,3,6	
140 PAPER #1,2	

```
150 CLS #1
160 WINDOW #2,12,19,3,6
170 PAPER #2,3
180 CLS #2
190 WINDOW #3,2,9,8,11
200 PAPER #3,4
210 CLS #3
220 WINDOW #4,12,19,8,11
230 PAPER #4,5
240 CLS #4
250 WINDOW #5,2,9,13,16
260 PAPER #5,6
270 CLS #5
280 WINDOW #6,12,19,13,16
290 PAPER #6,7
300 CLS #6
310 WINDOW #7,2,9,18,24
320 PAPER #7,8
330 CLS #7
340 PRINT "This is window zero the d
efault window."
350 PRINT #1,"One"
360 PRINT #2,"Two"
370 PRINT #3,"Three"
380 PRINT #4,"Four"
390 PRINT #5,"Five"
400 PRINT #6,"Six"
410 PRINT #7,"This is window....seve
n the eighth..window."
420 IF INKEY$="" THEN 420
```

The teacher explained that there were nine colours listed, one for the writing and one for each window. No BORDER colour was needed as the default, deep blue was ideal.

By pressing SHIFT and the arrow key up a second cursor will appear. Put the cursor over a word you wish to copy and hold the COPY key down until you have copied eg 'WINDOW #' in line 130 for line 160, and then type in the new numbers and commas.



Each WINDOW, PAPER and CLS line can be COPIED in part. Take great care and you will not need to EDIT.

Line 340 is not a mistake, this is how it will look as you type it in. Line 410 has 4 spaces and later 2 spaces between words shown as extra full stops so that you can see them. Line 420 is a line that stops Ready and the cursor from appearing on screen.

The '\$' or dollar sign is above '4'. Use SHIFT for the hash and dollar signs.

Albert was told to type in the program and SAVE it using his number: SAVE"WINDOW12 and then to RUN the program.

This is how the program should look:



This is window zero the default window.	
One	Two
Three	Four
Five	Six
This is window seven the eighth window.	

Albert didn't get his program correct the first time and had to EDIT some lines and SAVE his program again. He missed out some commas. Did you type the program correctly?

Albert's eyes were beginning to play tricks on him. He often rubbed them because he couldn't see clearly in the distance. His best friend told him his eyes looked 'square'!

Albert's mother was shocked. She said that he must go to the doctor.

The doctor tested Albert's eyes and frowned and said Mmm several times and then asked Albert if he had a computer... When Albert told him he did have a computer; the doctor wanted to know how many hours a day Albert spent at the computer?

His mother told the doctor that it would be five or six hours.

The doctor said Mmm again and told Albert that he was not stretching his eyes enough. Albert was an eagle-eyed seagull and had to see

clearly in the distance. Because Albert had watched the computer screen for too long at a time, his eye muscles were not working properly.

In future Albert was to pause in his game and look as far out the window as he could. As well he was to look to the top left corner of the room and then the top right corner, and stretch his eye muscles. Soon his eyes would go back into shape and Albert would not have square eyes.



Albert doing eye exercises for the doctor.



You don't want to get square eyes like Albert, do you!

NEW COMPUTER WORDS

AUTO Automatic numbering in tens.
WINDOW A window lets you divide up the screen for different purposes. There can be up to 8 windows at a time. WINDOW #0 is the default window.

WINDOW #1,1,40,1,25 is the full screen size. WINDOW and LOCATE start numbering from the same positions, top left on the screen. The command lists the number of the window first with the hash sign, and then the left column number, the right column number, the top row number and the bottom row number, separated by commas.

Window, stream, left, right, top, bottom

is an easy way to remember how to write the command. The stream is the #1,... or #2,... and so on.

Other commands also use the stream indicator:

LIST	LIST #1
PEN	PEN #1,3
PAPER	PAPER #5,4

```
CLS          CLS #7
PRINT        PRINT #1, "Hi!"
LOCATE       LOCATE #2,9,17
LIST #8 [RETURN] sends a listing of
a program to the printer.
```

DEFAULT The default setting is the one that was built in to the computer. It is the screen size and colour you see when the computer is first switched on.

IF INKEY\$="" THEN..(and the same line number again) A line that waits for a key to be pressed before the computer does anything more. This stops the Ready prompt and cursor from appearing on screen.

COPY SHIFT plus the arrow key up moves the cursor to a character to be copied. Hold the COPY key until the second cursor has run across all you wish to copy.

Answers: 1. 25
2. LOCATE
3. Top left hand corner
4. Bottom right hand corner
5. Ready

